

REMARKS

Claims 1-2 and 4-13 are all the claims presently pending in the application. Claims 1-2, 4 and 6 have been amended to more particularly define the invention. Claims 7-13 have been added to assure Applicant the degree of protection to which his invention entitles him. Claim 3 has been canceled without prejudice or disclaimer in the interest of expediting prosecution.

It is noted that the claim amendments herein or later are not made to distinguish the invention over the prior art or narrow the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein or later should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-2 and 5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Pawl (U.S. Patent No. 4,969,793). Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pawl in view of Smillie III et al. (U.S. Patent No. 5,054,578). Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pawl in view of Colburn (U.S. Patent No. 3,752,331). Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pawl in view of Carlsson et al. (U.S. Publication No. 2002/0070574).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

An exemplary aspect of the invention, as recited in claim 1, is directed to a luggage storage structure for a vehicle with a concave storage portion formed to protrude downward in a floor panel and a plate member provided to cover an upper portion of the concave storage

portion. The luggage storage structure includes a transfer mechanism for transferring the plate member up and down relative to the floor panel, a pair of rail frames fixed on the floor panel on opposite sides of the concave storage portion and parallel to each other, a pair of drive links, a pair of driven links, a plurality of sliders for transferring in the longitudinal direction of the rail frame, and a driving mechanism provided to transfer each slider in the longitudinal direction of the rail frame.

A first end of each drive link is connected with one of the rail frames so as to transfer in a longitudinal direction of the rail frame and a second end of each drive link is connected with the plate member. The drive links are horizontal when the plate member closes the concave storage portion, and the drive links are raised when the plate member is transferred upward. A first end of each driven link is connected with the plate member and a second end of each driven link is connected with the floor panel. A middle portion of each driven link is connected with one of the drive links so as to rotate. The driven links are horizontal when the plate member closes the concave storage portion and the driven links are raised when the plate member is transferred upward. The sliders engage with the first ends of the drive links.

Each drive link and each driven link shift between an approximately horizontal state and a raised state by transferring the first end of each drive link along the rail frame. Each drive link includes a contacting portion provided between the middle portion of the drive link and the first end of the drive link, and each of the sliders includes a contacting surface formed thereon to be brought into contact with the contacting portion. The contacting surface slopes in a direction in which the slider transfers when the drive link shifts from the approximately horizontal state to the raised state.

Conventional lifters include two links that are connected so as to rotate and form an X-shape. One link is rotatably connected with a plate member at a first end, while the other end is connected to a predetermined surface such that the other end may transfer in a horizontal direction. The other link is rotatably connected to the predetermined surface at one end, while the other end is connected to the plate member so as to transfer in a horizontal direction. In such lifters, each link has the same length and is linked so as to rotate about a middle portion relative to each other. In this manner, the plate member may be transferred upwardly and downwardly. (See Application at page 2, lines 7-25 and page 3, lines 1-6)

However, such conventional lifters simply transfer the plate member in an up and down direction. As such, these lifters cannot be disposed in an area where the vertical stroke of the plate member can be obstructed. Due to this, such conventional lifters are not appropriate for spaces that are sloped in an upper area, such as a loft of a house or a trunk of an automobile. Therefore, since the transfer direction of the plate member in conventional lifters is limited to just upwardly and downwardly, such lifters are quite inconvenient for practical uses. (See Application at page 3, lines 7-26 and page 4, lines 1-5)

The claimed invention, on the other hand, provides a luggage storage structure including on each drive link a contacting portion between the middle portion of the drive link and the first end of the drive link, and each of the sliders includes a contacting surface formed thereon to be brought into contact with the contacting portion. These features, amongst others, enable the plate member to transfer in a longitudinal direction in the forward and rearward directions of the rail frame, while transferring up and down. (See Application at page 35, lines 5-7)

II. THE 35 USC §112, SECOND PARAGRAPH REJECTION

Claim 1 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The claim has been amended, above, to overcome this rejection. Specifically, claim 1 has been amended to more clearly define the respective ends of the drive links and driven links, as requested by the Examiner.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

III. THE PRIOR ART REFERENCES

A. The Pawl Reference

The Examiner alleges that the invention of claims 1-2 and 5 are anticipated by Pawl. However, Applicant respectfully submits that the reference does not teach or suggest each and every element of the claimed invention.

Pawl discloses a power-operated lift, adapted to be mounted in a vehicle trunk, having linkage means for raising a load-supporting platform in a vertical direction. (See Pawl at Abstract)

However, Pawl does not teach or suggest that “*each drive link includes a contacting portion provided between said middle portion of said drive link and said first end of said drive link, [and] each of said sliders includes a contacting surface formed thereon to be brought into contact with said contacting portion,*” as recited in the claimed invention.

In fact, the Examiner concedes on page 4, item 7 of the Office Action that Pawl does not teach or suggest such a contacting portion or contacting surface. Clearly, there are elements of the invention of claims 1-2 and 5 that are not taught or suggested by Pawl.

Therefore, Applicant submits that there are elements of the invention of claims 1-2 and 5 that are not taught or suggested by Pawl. Therefore, the Examiner is respectfully requested to withdraw this rejection.

B. The Smillie III et al. Reference

The Examiner alleges that Pawl would have been combined with Smillie III et al. to form the invention defined in claim 3. However, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Smillie III et al. discloses a power-operated lift and presenting mechanism which lifts an article stored on a platform member in a vehicle trunk to an upwardly lifted position. (See Smillie III et al. at Abstract)

Applicant respectfully submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are completely unrelated, and no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

In fact, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, contrary to the Examiner's allegations, neither of these references teach or suggest their combination.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

As noted above, the Examiner concedes that Pawl does not teach or suggest that “*each drive link includes a contacting portion provided between said middle portion of said drive link and said first end of said drive link, [and] each of said sliders includes a contacting surface formed thereon to be brought into contact with said contacting portion,*” as recited in the claimed invention. Rather, the Examiner attempts to rely on Smillie III et al. to make up for the deficiencies of Pawl.

However, neither the Pawl, nor Smillie III et al., nor any combination thereof teaches or suggests the above features. Indeed, Smillie III et al. makes no reference or suggestion to a contacting portion provided between the middle portion of the drive link and the first end of said drive link.

As recited in claim 1, the present invention includes independently a contacting portion 20 provided between the middle portion of a drive link 8, which is connected with the middle portion of a driven link 9, and the first end of the drive link. (See Application at Figure 2) In contrast, according to the disclosure of Pawl, the central pivot means 70 at the middle portion of the drive link 64,66 connecting the drive links 64 and the driven links 58 also serves as the contacting portion to be in contact with the contacting portion 110. (See Pawl at Figures 5 and 8)

The same can be said with the disclosure of Smillie III et al., with contacting portion 44, drive link 38, contacting surface 83, and driven links 40. In fact, Smillie III et al. discloses that “[t]he carriage assembly 36 includes pairs of outside lift bar 38 and inside lift bar 40, pivotally mounted at central pin 42, which receives central roller 44.” (See Smillie III et al. at column 3, lines 27-29 and Figures 1, 3, and 7) Clearly, the central roller 44 is located at the center of the lift bars 38,40.

Moreover, Smillie III et al. discloses that the actuation screw 54 is placed in the center of the apparatus. (See Smillie III et al. at Figure 1) Since the actuation screw 54 would be an obstacle to placing or removing luggage from a concaved storage portion under the plate, the apparatus of Smillie III et al. cannot function as a plate of a concaved storage portion. Therefore, Applicant submits that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Pawl with the teachings of Smillie III et al.

Therefore, Applicant submits that there are elements of the invention of the claimed invention that are not taught or suggested either Pawl, Smillie III et al, or any combination thereof. Therefore, the Examiner is respectfully requested to withdraw this rejection.

C. The Colburn Reference

The Examiner alleges that Pawl would have been combined with Colburn to form the invention defined in claim 4. However, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Colburn discloses a lifting mechanism that includes a base frame and a load supporting frame that are operatively interconnected by a scissor linkage. (See Colburn at Abstract)

Applicant respectfully submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are completely unrelated, and no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

In fact, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, contrary to the Examiner's allegations, neither of these references teach or suggest their combination.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

The Examiner concedes that Pawl does not teach or suggest "*two electric motors are disposed, and each slider is independently driven by each electric motor,*" as recited in claim 4. Rather, the Examiner attempts to rely on Colburn to make up for the deficiencies of Pawl.

However, in the disclosure of Colburn, the disclosed apparatus cannot function as a plate for a concaved storage portion. Therefore, Applicant submits that it would not have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Pawl with the teachings of Colburn.

Further, Colburn fails to make up for the deficiencies of Pawl described above directed toward "*each drive link includes a contacting portion provided between said middle portion of said drive link and said first end of said drive link, [and] each of said sliders includes a contacting surface formed thereon to be brought into contact with said contacting portion,*" as recited in the claimed invention.

Neither Pawl, nor Colburn, nor any combination thereof, teaches or suggests this feature. Indeed, Colburn makes no reference or suggestion to a contacting portion provided between said middle portion of the drive link and the first end of said drive link and that each of the sliders includes a contacting surface formed thereon to be brought into contact with such a contacting portion.

Thus, even assuming arguendo that Colburn may disclose the use of two motors for raising a plate, as asserted by the Examiner, there is no teaching or suggestion in Colburn of a contacting portion provided between said middle portion of the drive link and the first end of said drive link and that each of the sliders includes a contacting surface formed thereon to be brought into contact with such a contacting portion, as recited in the claimed invention. Indeed, the cited reference does not even recognize the desirability or benefit of providing such a feature. Colburn clearly does not make up for the deficiencies of Pawl.

In light of the above, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of claim 4. Therefore, the Examiner is respectfully requested to withdraw this rejection.

D. The Carlsson et al. Reference

The Examiner alleges that Pawl would have been combined with Carlsson et al. to form the invention defined in claim 6. However, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Carlsson et al. discloses a loading compartment in a vehicle having a recess in the floor of the vehicle and a cover. (See Carlsson et al. at Abstract)

Applicant respectfully submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are completely unrelated, and no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

In fact, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, contrary to the Examiner's allegations, neither of these references teach or suggest their combination.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

The Examiner concedes that Pawl does not teach or suggest "*a lock mechanism for locking the plate member and the plate member frame having a release portion capable of unlocking the lock mechanism, the release portion of the lock mechanism being disposed on a lower surface of the plate member,*" as recited in claim 6. Rather, the Examiner attempts to rely on Carlsson et al. to make up for the deficiencies of Pawl.

However, in the disclosure of Carlsson et al., the cover 7 opens as a single swinging door. Carlsson et al. actually teaches that "[the] cover 7 is mounted to the floor 4 by means of hinges 8," and that "[t]he cover 7 is pivotally connected to a front edge of the recess 5." (See Carlsson et al. at page 1, paragraphs [0013] and [0015] and Figures 1-2) (Emphasis added) In contrast, the present invention discloses a plate that moves upward and downward with the plate being substantially horizontal with the floor panel. Therefore, Applicant submits that it would NOT have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Pawl with the teachings of Carlsson et al.

Notwithstanding, Carlsson et al. fails to make up for the deficiencies of Pawl described above directed toward "*each drive link includes a contacting portion provided between said middle portion of said drive link and said first end of said drive link,[and] each*

of said sliders includes a contacting surface formed thereon to be brought into contact with said contacting portion,” as recited in the claimed invention.

Neither Pawl, nor Carlsson et al., nor any combination thereof, teaches or suggests this feature. Indeed, Carlsson et al. makes no reference or suggestion to a contacting portion provided between said middle portion of the drive link and the first end of said drive link and that each of the sliders includes a contacting surface formed thereon to be brought into contact with such a contacting portion.

Thus, even assuming arguendo that Carlsson et al. may disclose a locking mechanism, as asserted by the Examiner, there is no teaching or suggestion in Carlsson et al. of a contacting portion provided between said middle portion of the drive link and the first end of said drive link and that each of the sliders includes a contacting surface formed thereon to be brought into contact with such a contacting portion, as recited in the claimed invention. Indeed, the cited reference does not even recognize the desirability or benefit of providing such a feature. Carlsson et al. clearly does not make up for the deficiencies of Pawl.

In light of the above, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of claim 6. Therefore, the Examiner is respectfully requested to withdraw this rejection.

IV. FORMAL MATTERS AND CONCLUSION

The Office Action objects to the drawings under 37 C.F.R. § 1.121(d) for failing to show every feature of the invention specified in the claims. In particular, the Examiner alleges that the “locking mechanism” is not shown. Applicant respectfully directs the

Examiner to element 28 of Figure 1, which is described on page 42, lines 24-26 and page 43, lines 1-5 of the Application as the “locking mechanism.” Additionally, claim 6 has been amended to more clearly define the invention. In light of the above, the Examiner is respectfully requested to withdraw the objection to the drawings.

Applicant notes that the present Application claims foreign priority benefits under 35 U.S.C. § 119 of Japanese Patent Application 2003-038449, Japanese Patent Application 2003-038449, and Japanese Patent Application 2003-038449, all filed February 17, 2003, certified copies of which were submitted on concurrently with the Application on February 12, 2004. Applicant respectfully requests the Examiner to acknowledge on the Office Action Summary (form PTOL-326) that “Certified copies of the priority documents have been received.”

In view of the foregoing, Applicant submits that claims 1-2 and 4-13, all the claims presently pending in the application, are patentably distinct over the prior art of record and are allowable, and that the application is in condition for allowance. Such action would be appreciated.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned attorney at the local telephone number listed below to discuss any other changes deemed necessary for allowance in a telephonic or personal interview.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. The Commissioner is authorized to charge any deficiency in fees, including

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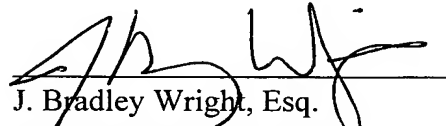
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extension of time fees, or to credit any overpayment in fees to Attorney's Deposit Account

No. 50-0481.

Respectfully Submitted,

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